

July 26, 2004

LICENSEES: ALL PRESSURIZED-WATER REACTORS

FACILITIES: ALL PRESSURIZED-WATER REACTORS

SUBJECT: SUMMARY OF JUNE 3, 2004, MEETING WITH NUCLEAR ENERGY INSTITUTE, MATERIALS RELIABILITY PROGRAM AND INDUSTRY TO DISCUSS NRC BULLETIN 2004-01, "INSPECTION OF ALLOY 82/182/600 MATERIALS USED IN THE FABRICATION OF PRESSURIZER PENETRATIONS AND STEAM SPACE PIPING CONNECTIONS AT PRESSURIZED-WATER REACTORS, DATED MAY 28, 2004" (TAC NO. MC1626)

On June 3, 2004, a Category 2 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Nuclear Energy Institute, Materials Reliability Program and industry at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to provide an opportunity for recipients of NRC Bulletin 2004-01 and members of the general public to ask questions of the NRC staff in order to receive clarification about the contents of the bulletin. A list of attendees is provided as Attachment 1.

The NRC staff presented information (Attachment 3) discussing the background and operational experience prior to the development of the bulletin, the initial NRC actions to communicate with the industry and the industry response, and the subsequent development of the bulletin. The NRC staff provided conclusions about the nature of the potential for primary water stress corrosion cracking (PWSCC) at the specified pressurizer penetrations and the need to obtain the information necessary to ensure that industry/licensee plans for inspection of these areas would promptly identify and correct PWSCC flaws which may occur.

At the conclusion of the prepared presentation, the NRC staff opened the discussion to questions from the industry. Attachment 2 summarizes the questions received and the NRC staff's answers. The NRC staff then asked if there were any questions from any other stakeholders. None were offered. Members of the public were in attendance. Public Meeting Feedback Forms were not received.

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Please direct any inquiries to Timothy G. Colburn, NRR at 301-415-1402, or [tgc@nrc.gov](mailto:tgc@nrc.gov) or Matthew A. Mitchell, NRR, at 301-415-3303 or [mam4@nrc.gov](mailto:mam4@nrc.gov).

**/RA/**

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Division of Licensing project Management  
Office of Nuclear Reactor Regulation

Attachments: 1. List of Attendees  
2. Questions and Answers  
3. NRC Staff Slides - ADAMS accession number ML041170198

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**/RA/**

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DATE	7/19/04	7/19/04	7/21/04

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LIST OF ATTENDEES  
CATEGORY 2 PUBLIC MEETING BETWEEN  
THE NUCLEAR REGULATORY COMMISSION (NRC), NUCLEAR ENERGY INSTITUTE (NEI),  
MATERIALS RELIABILITY PROGRAM (MRP), AND INDUSTRY  
REGARDING NRC BULLETIN 2004-01  
JUNE 3, 2004 9:00-11:30 a.m.

	<u>NAME</u>	<u>ORGANIZATION</u>
1.	Timothy G. Colburn	NRC/NRR/PDI-1
2.	Richard Barrett	NRC/DE
3.	William Bateman	NRC/DE/EMCB
4.	Edmund Sullivan	NRC/DE/EMCB
5.	Matthew Mitchell	NRC/DE/EMCB
6.	Todd Mihtz	NRC/RES/DET/MEB
7.	Samantha Crane	NRC/RES/DET/MEB
8.	Allen Hiser	NRC/RES/DET/MEB
9.	Jerrold Sullivan	NRC/OIG
10.	Alex Marion	NEI
11.	Jim Riley	NEI
12.	Daniel Horner	McGraw-Hill
13.	Altheia Wyche	SERCH Licensing/Bechtel
14.	D. Rick Graham	Southern Nuclear
15.	Matthew Wagenhofer	Structural Integrity Associates
16.	Kazuhiko Kishioka	Japan Atomic Power Company

QUESTIONS AND ANSWERS FROM STAKEHOLDERS  
DURING JUNE 3, 2004, CATEGORY 2 PUBLIC MEETING  
TO DISCUSS NRC BULLETIN 2004-01

Below is a list of paraphrased questions relating to NRC Bulletin 2004-01, received during the question and answer portion of the Category 2 meeting both from those in attendance and those participating by teleconference. Where possible, the name and organization of the person asking the question is provided. For those participating by teleconference, I apologize for any misspellings of names or organizations as in the interests of moving forward, we did not obtain spellings during the roll call portion of the meeting.

Question: Alex Marion, NEI. With respect to scope expansion if circumferential flaws are discovered, isn't that a new regulatory position?

Answer: The NRC staff tried to address the Westinghouse Owner's Group position. Slide 11 discusses the need to question licensees about their plans for scope expansion in order to make sure they understand the extent of condition if circumferential flaws are discovered.

Question: Alex Marion, NEI. Five Bulletins and an Order have been issued related to this issue. At what point does the information provided get communicated to the licensees?

Answer: Licensees receive an evaluation of their responses to the Bulletins and Order. Information related to the various Bulletin issues is posted on the NRC Public web site. The last 3 or 4 Bulletins have not required any license modifications.

Question: Alex Marion, NEI. Has the NRC posted collective evaluations of licensee responses on the Public web site?

Answer: No. However the NRC staff will take the suggestion to do so under consideration.

Question: Alex Marion, NEI. Among the information requested within 60 days following restart from the next refueling outage in paragraph 2(a) of the Bulletin, is a summary of the disposition of boric acid indications. Bulletin 2002-01 asks for similar information. Can licensees just reference that response?

Answer: The NRC staff will need to assess what information Bulletin 2002-01, related to the upper reactor pressure vessel head, requires. Typically, responses received may lead to further requests for information which may lead to the issuance of additional Bulletins (such as that for the lower head) or generic communication. Regulatory Information Summary 2003-13 summarized the review of responses received to Bulletin 2002-01. The responses to the upper head Bulletin were reviewed and it was determined that an Order was necessary. The licensee

inspections in response to Bulletin 2003-02 are still in progress so we don't have a summary of that information yet.

Question: Jim Riley, NEI. How will requests to extend the response time be handled? The Bulletin was issued just before the long holiday weekend.

Answer: Responses coming due on a weekend may be submitted the next business day. No additional time to respond due to the Memorial Day holiday is planned at this time.

Question: Jim Riley, NEI. What time frame is expected for the review of past inspection results?

Answer: Item 1(a) of the Bulletin requests that licensees review information back to the beginning of operational experience for evidence of this type of degradation.

Question: Paul Willoughby, Dominion Power (via teleconference). With respect to item 1(a) in the Bulletin, if there are no materials of this type (alloy 82/182/600), then it would seem items 1(b) and 1(c) would not need to be answered.

Answer: The licensee can indicate that if no susceptible material is present, then the locations are not susceptible to the type of degradation of concern (PWSCC).

Question: Larry Mathews, Southern Nuclear (via teleconference). Some locations have none of the material of concern and some locations have very limited material. How much detail is required for these locations?

Answer: Licensees can identify which locations have been considered and which have no susceptible material. Additional detail for these locations is not necessary.

Question: Scott Boggs, Florida Power & Light (via teleconference). What is the staff interested in with respect to piping connected to the pressurizer?

Answer: The NRC staff included as areas of interest, any piping locations which although far from the pressurizer shell, have essentially the same environment as the pressurizer and contain susceptible material. The pressurizer surge line is not within the Bulletin scope.

Question: Alex Marion, NEI. NEI will take for action to obtain formal clarification from the NRC in writing for some points that may be unclear.

Answer: The NRC staff will review how this has been handled for previous generic communications on similar subjects and plan to follow the same process.

Question: Dan Horner, McGraw-Hill Publications. With respect to further regulatory action based on the responses received, would the NRC staff wait until the refueling outage inspections are completed?

- Answer: No. Depending upon the information received, the NRC staff could require additional regulatory action based either on the 60-day or 15-day (if any) responses.
- Question: Dan Horner, McGraw-Hill Publications. I note that a portion of the reactor coolant pressure boundary (RCPB) has still not been covered. Is there any update on when that last portion of the RCPB will be covered?
- Answer: The NRC staff has moved beyond preliminary discussion of the issue with the Advisory Committee on Reactor Safeguards (ACRS) but not much has been finalized beyond the concept stage. It is being discussed internally within the NRC.
- Question: Dan Horner, McGraw-Hill Publications. In addition to the indications found at Palo Verde, Unit 2, some indications have been reported at Palo Verde, Unit 3. Can you comment?
- Answer: At Palo Verde, Unit 3, a leaking heater sleeve was discovered during a maintenance outage. A mechanical nozzle seal assembly (MNSA) repair was made.
- Question: Steve Bennett, Entergy (via teleconference). Bulletin 2004-01 item (1)(c) request covers the next and subsequent inspections, but the questions in Section 2 seem limited to the next inspection.
- Answer: These are intentionally different. The report requested by the Section 2 questions will only cover the next inspection.
- Question: Larry Mathews (via teleconference). With respect to inspection plans and review of past inspection results for evidence of circumferential and axial cracks, how detailed would the information need to be for socket weld leaks, for example.
- Answer: It is acceptable to provide a different approach to joint designs at different locations. The NRC staff wants licensees responding to Bulletin request (1)(c) to propose what they feel would be appropriate.
- Question: Steve Bennett, Entergy (via teleconference). If licensees were to replace or remove susceptible material in subsequent outages, would an additional Bulletin 2004-01 response be required?
- Answer: No, but if these plans are known in time to be included in the initial response, that information would be valuable to the NRC staff.
- Question: Alex Marion, NEI. Additional regulatory framework needs to be developed on these kinds of issues. 10 CFR 50.55a is not adequate to handle these issues. The NRC staff needs to engage the industry to help with development of a new regulatory framework.
- Answer: There is a wide variation in dealing with these kinds of issues depending on where in the RCPB the issue manifests itself, whether we are talking about

pressurized-water reactors or boiling water reactors, and other variables. There is not an intent to layer new requirements. It is the NRC staff's plan to talk to all stakeholders prior to going before the Commission with new issues.

Question: Rick Graham, Southern Nuclear. The original issue arose from Combustion Engineering (CE)-designed facilities leaking pressurizer heater sleeves. The Bulletin now expands the issue to cover additional components at other facility designs (all PWRs)?

Answer: Yes. The issue has been expanded to cover additional susceptible material which may be located in a similar environment, therefore having a similar concern with respect to PWSCC. It has been expanded to other than CE-designed facilities because there is no good engineering basis to restrict the concerns related to PWSCC to the CE-designed plants or to the pressurizer heater sleeve components.